

AMENDMENTS TO THE CLAIMS

Claim 15-42 (Canceled)

Claim 43 (Currently Amended): A material for purification of a semiconductor polishing slurry ~~which is used~~ to remove metals present in an acidic semiconductor polishing slurry, comprising:

a functional group capable of ion-exchanging with a hydroxyl group or capable of forming a metal chelate, which enables to maintain a main constituent of the acidic semiconductor polishing slurry; and

a fibrous substrate of which at least the surface is fixed onto by the functional group, wherein the hydroxyl group is an ethylenical hydroxyl group;

wherein the functional group capable of forming a metal chelate is at least one group selected from a group containing aminocarboxylic acids, a group containing phosphoric acids, a group containing thio compounds and at least a part of acid type functional groups of these groups determined as an acid type (H type); and

wherein the fibrous substrate is at least one selected from a plant-based natural fiber, an animal-based natural fiber, a cellulose-based regenerated fiber, a polyvinyl alcohol-based synthetic polymer fiber, polyethylene imine-based synthetic polymer fiber, polyester-based synthetic polymer fiber, polyvinyl chloride-based synthetic polymer fiber, polyacrylonitrile-based synthetic polymer fiber, polyamide-based synthetic polymer fiber and polyolefin-based synthetic polymer fiber.

Claim 44 (Currently Amended): A material for purification of a semiconductor polishing slurry ~~which is used~~ to remove metals present in a basic semiconductor polishing slurry, comprising:

a functional group capable of ion-exchanging with a hydroxyl group or capable of forming a metal chelate, which enables to maintain a main constituent of the basic semiconductor polishing slurry; and

a fibrous substrate of which at least the surface is fixed onto by the functional group, wherein the hydroxyl group is an ethylenical hydroxyl group;

wherein the functional group capable of forming a metal chelate is at least one group selected from a group containing aminocarboxylic acids, a group containing phosphoric acids, a group containing thio compounds and at least a part of acid type functional groups of these groups determined as alkali metal salt or ammonium salt; and

wherein the fibrous substrate is at least one selected from a plant-based natural fiber, an animal-based natural fiber, a cellulose-based regenerated fiber, a polyvinyl alcohol-based synthetic polymer fiber, polyethylene imine-based synthetic polymer fiber, polyester-based synthetic polymer fiber, polyvinyl chloride-based synthetic polymer fiber, polyacrylonitrile-based synthetic polymer fiber, polyamide-based synthetic polymer fiber and polyolefin-based synthetic polymer fiber.

Claim 45 (Currently Amended): A process for purification of a semiconductor polishing slurry, comprising:

passing an object semiconductor polishing slurry through at least one material for purification of a semiconductor polishing slurry ~~that is used~~ to remove metals present in the semiconductor polishing slurry, the at least one material comprising a functional group capable of ion-exchanging with a hydroxyl group or capable of forming a metal chelate, which enables to maintain a main constituent of the semiconductor polishing slurry; and a fibrous substrate of which at least the surface is fixed onto by the functional group, to remove metals present in the object semiconductor polishing slurry; and then

after removing the metals present in the object semiconductor polishing slurry, supplying all of the object semiconductor polishing slurry to a step of polishing a semiconductor; or

after introducing at least a part or all of the object semiconductor polishing slurry to an original semiconductor polishing slurry and circulating the introduced slurry through the at least one material again to remove metals, supplying the circulated slurry to the step of polishing a semiconductor.

Claim 46 (Previously Presented): A process for purification of a semiconductor polishing slurry according to claim 45,

wherein the functional group capable of forming a metal chelate is at least one group selected from a group containing aminocarboxylic acids, a group containing phosphoric acids, a group containing thio compounds, a group containing amines and a group containing hydroxylamines.

Claim 47 (Currently Amended): A process for purification of a semiconductor polishing slurry, comprising:

passing an object semiconductor polishing slurry through at least one material for purification of a semiconductor polishing slurry ~~that is used~~ to remove metals present in the semiconductor polishing slurry, the at least one material comprising a functional group capable of ion-exchanging with a hydroxyl group or capable of forming a metal chelate, which enables to maintain a main constituent of the semiconductor polishing slurry; and a fibrous substrate of which at least the surface is fixed onto by the functional group, where the hydroxyl group is an ethylenical hydroxyl group; where the functional group capable of forming a metal chelate is at least one group selected from a group containing aminocarboxylic acids, a group containing phosphoric acids and a group containing thio compounds; and where the fibrous substrate is at least one selected from a plant-based natural fiber, an animal-based natural fiber, a cellulose-based regenerated fiber, a polyvinyl alcohol-based synthetic polymer fiber, polyethylene imine-based synthetic polymer fiber, polyester-based synthetic polymer fiber, polyvinyl chloride-based synthetic polymer fiber, polyacrylonitrile-based synthetic polymer fiber, polyamide-based synthetic polymer fiber and polyolefin-based synthetic polymer fiber, to remove metals present in the object semiconductor polishing slurry; and then

after removing the metals present in the object semiconductor polishing slurry, supplying all of the object semiconductor polishing slurry to a step of polishing a semiconductor; or

after introducing at least a part or all of the object semiconductor polishing slurry to an original semiconductor polishing slurry and circulating the introduced slurry through the at least one material again to remove metals, supplying the circulated slurry to the step of polishing a semiconductor.

Claim 48 (Previously Presented): A process for purification of a semiconductor polishing slurry according to claim 45, wherein the at least one material is two or more materials that have different substrates and/or functional groups and that are laminated to form a layer or mixed.

Claim 49 (Previously Presented): A process for purification of a semiconductor polishing slurry according to claim 47, wherein the at least one material is two or more materials that have different substrates and/or functional groups and that are laminated to form a layer or mixed.

Claim 50 (Previously Presented): A process for purification of a semiconductor polishing slurry according to claim 45, wherein the at least one material is formed into a self-supportable sheet or felt.

Claim 51 (Previously Presented): A process for purification of a semiconductor polishing slurry according to claim 47 wherein the at least one material is formed into a self-supportable sheet or felt.

Claim 52 (Previously Presented): A process for purification of a semiconductor polishing slurry according to claim 45, wherein the at least one material is charged in a container provided with an inflow port and an outflow port for the object semiconductor polishing slurry so as to allow the object semiconductor polishing slurry to flow through the container.

Claim 53 (Previously Presented): A process for purification of a semiconductor polishing slurry according to claim 47, wherein the at least one material is charged in a container provided with an inflow port and an outflow port for the object semiconductor polishing slurry so as to allow the object semiconductor polishing slurry to flow through the container.

Claim 54 (Previously Presented): A process for purification of a semiconductor polishing slurry according to claim 45, wherein the at least one material is disposed in a flowable state within an area partitioned by a filter or a strainer through which the object semiconductor polishing slurry flows in a container provided with an inflow port and an outflow port for the object semiconductor polishing slurry.

Claim 55 (Previously Presented): A process for purification of a semiconductor polishing slurry according to claim 47, wherein the at least one material is disposed in a flowable state within an area partitioned by a filter or a strainer through which the object semiconductor polishing slurry flows in a container provided with an inflow port and an outflow port for the object semiconductor polishing slurry.

Claim 56 (Previously Presented): A process for purification of a semiconductor polishing slurry according to claim 45, wherein

the object semiconductor polishing slurry is acidic, and an acid type end group of the functional group capable of forming a metal chelate is an acid type (H type); or

the object semiconductor polishing slurry is alkaline, and an acid type end group of the functional group capable of forming a metal chelate is an alkali metal salt or ammonium salt.

Claim 57 (Previously Presented): A process for purification of a semiconductor polishing slurry according to claim 47, wherein

the object semiconductor polishing slurry is acidic, and an acid type end group of the functional group capable of forming a metal chelate is an acid type (H type); or

the object semiconductor polishing slurry is alkaline, and an acid type end group of the functional group capable of forming a metal chelate is an alkali metal salt or ammonium salt.

Claim 58 (Previously Presented): A process for purification of a semiconductor polishing slurry according to claim 45, wherein the object semiconductor polishing slurry is alkaline, and an acid type end group of the functional group capable of forming a metal chelate is an alkali metal salt or ammonium salt which is a main component showing alkalinity of the object semiconductor polishing slurry.

Claim 59 (Previously Presented): A process for purification of a semiconductor polishing slurry according to claim 47, wherein the object semiconductor polishing slurry is alkaline, and an acid type end group of the functional group capable of forming a metal chelate is an alkali metal salt or ammonium salt which is a main component showing alkalinity of the object semiconductor polishing slurry.